

## NOAA In Your State

# New Jersey

***NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.***

***The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by [congressional districts and cities or towns](#), [coastal programs](#), and then [statewide programs](#).***

### **Highlights of NOAA in New Jersey**

<a href="#">Port Agent Field Office</a>	Northfield	NJ-2
<a href="#">James J. Howard Laboratory</a>	Highlands	NJ-6
<a href="#">Jacques Cousteau National Estuarine Research Reserve</a>	Mullica River/Great Bay	NJ-6
<a href="#">Geophysical Fluid Dynamics Laboratory</a>	Princeton	NJ-12
<a href="#">Cooperative Institute for Modeling Earth Systems</a>	Princeton	NJ-12

The state of New Jersey also has one Cooperative Institute, one Weather Forecasting Offices, four Labs and Field Offices, one Science on a Sphere® exhibitions, and one National Estuarine Research Reserves.

### **Weather Forecast Offices**

Mount  
Holly-Greater  
Philadelphia  
Area and  
Delaware River  
Valley

**National Weather Service (NWS) Weather Forecast Offices (WFO)** are staffed 24/7/365 and provide weather, water, and climate forecasts and warnings to residents of New Jersey. There are 122 WFOs nationwide of which one is in New Jersey. Highly trained forecasters issue warnings and forecasts for weather events, including severe thunderstorms, tornadoes, hurricanes, winter storms, floods, and heat waves to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including wireless emergency alerts, social media, [weather.gov](http://weather.gov), and NOAA Weather Radio All Hazards. Each WFO has a Warning Coordination Meteorologist who actively conducts outreach and educational programs that strengthen working relationships with local partners in emergency management, government, the media and academic communities. Forecasters provide Impact-based Decision Support Services (IDSS), both remotely and on-site during critical emergencies such as wildfires, floods, chemical spills, and major recovery efforts. To gather data for forecasting and other purposes, NWS WFO staff monitor, maintain and use Automated Surface Observing Stations and Doppler Weather Radar. In addition to the WFOs, NWS operates specialized national prediction centers and regional headquarters throughout the U.S. for a total of 168 operational units. Over 85% of NWS' workforce is in the field. For current New Jersey weather, visit [www.weather.gov](http://www.weather.gov) and, on the national map, click on the relevant county or district.

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### **Science On a Sphere®**

Morristown NJ-11

**Science On a Sphere (SOS)** is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain in a way that is simultaneously intuitive and captivating what are sometimes complex environmental processes. It is located at the Morristown-Beard School.

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#### **NJ-1**

##### **Camden**

#### **NOAA Office of Education - Environmental Literacy Program**

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In New Jersey, ELP supports the Adventure Aquarium & Center for Aquatic Sciences (Camden) as a member of the Coastal Ecosystem Learning Center (CELC) Network, which is a consortium of 25 aquariums and marine science education centers working together to engage the public in protecting coastal and marine ecosystems.

## **NJ-2**

### **Northfield**

#### **National Marine Fisheries Service (NMFS) - [Port Agent Field Office](#)**

The Greater Atlantic Region's Port Agent Team works directly with the fishing industries of the region to provide in-person advice and support to fishermen and seafood dealers. Port agents also serve as a conduit for industry to relay information to the Regional Administrator and other NOAA staff about fishing industry concerns, thoughts and activities. Team members assist seafood dealers and vessel operators and owners with data reporting requirements, in navigating the permitting process, and with other Agency regulations and processes. They collect biological samples of seafood landed by commercial fishermen for use in fisheries stock assessments. They also provide the general public with information on fisheries and the marine environment by attending public events and through ad-hoc interactions.

#### **Office of Oceanic and Atmospheric Research (OAR) - [Carbon Cycle Gases and Halocarbons](#)**

NOAA's Earth System Research Laboratory Global Monitoring Laboratory (ESRL/GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by ESRL researchers. These air samples are delivered to ESRL/GML in Boulder, Colorado for measurements of CO<sub>2</sub>, CH<sub>4</sub>, and other greenhouse gasses. This data will improve understanding and models of the global carbon cycle. Sampling is conducted bi-weekly. Some air samples from the small aircraft program are also analyzed for halocarbon gases that can destroy the stratospheric ozone layer. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer so it can protect us from the sun's ultraviolet radiation.

## **NJ-3**

### **Mount Holly-Greater Philadelphia Area and Delaware River Valley**

#### **National Weather Service (NWS) - [Weather Forecast Office](#)**

Located about 25 miles northeast of Philadelphia just outside Mount Holly, this NWS Weather Forecast Office (WFO) is staffed around-the-clock every day, and provides the best possible weather, water, and climate forecasts and warnings to residents of most of New Jersey, eastern Pennsylvania, Maryland's upper eastern shore, and Delaware. This office also provides marine forecasts and warnings for the Atlantic coastal waters from Sandy Hook, New Jersey to Fenwick Island, Delaware, and the entire Delaware Bay. Highly trained forecasters issue warnings and forecasts for events, including severe thunderstorms, tornadoes, winter storms, floods, and heat waves. This essential information is provided to the general public, media, emergency management and law enforcement officials, the aviation and marine communities, agricultural interests, businesses, and others. Information is disseminated in many ways, including through dedicated government channels, satellite, the Internet, and NOAA Weather Radio All Hazards.

Forecasters also provide Impact-based Decision-Support Services (IDSS), both remotely and on-site, during critical emergencies, such as wildfires, floods, chemical spills, and for major recovery efforts such as those following the Joplin and Moore tornadoes, Hurricanes Katrina and Sandy, and the Sept. 11, 2001, terrorist attacks in New York City and Washington D.C. The WFO collects and disseminates precipitation, river, and rainfall data, and prepares local climatological data. The WFO operates Automated Surface Observing Stations (ASOS), as well as the local Doppler Weather Radar, which provides critical information about current weather conditions. The radar data enables forecasters to issue warnings for tornadoes, severe thunderstorms, and flash floods.

### **Delaware River and Bay Districts**

#### **National Ocean Service (NOS) - [Delaware River and Bay PORTS](#)**

A Physical Oceanographic Real-Time System (PORTS<sup>®</sup>) is operated cooperatively with the local maritime community along the Delaware Bay and River at which real-time data are quality-controlled and disseminated to local users for safe

and efficient navigation. Real-time data are available for water levels from eleven stations, meteorological data from eleven locations, tidal current data from two three locations, and air gap measurements from bridges at three locations.

### ***Forked River***

#### **National Marine Fisheries Service (NMFS) - [Port Agent Field Office](#)**

The Greater Atlantic Region's Port Agent Team works directly with the fishing industries of the region to provide in-person advice and support to fishermen and seafood dealers. Port agents also serve as a conduit for industry to relay information to the Regional Administrator and other NOAA staff about fishing industry concerns, thoughts and activities. Team members assist seafood dealers and vessel operators and owners with data reporting requirements, in navigating the permitting process, and with other Agency regulations and processes. They collect biological samples of seafood landed by commercial fishermen for use in fisheries stock assessments. They also provide the general public with information on fisheries and the marine environment by attending public events and through ad-hoc interactions.

### ***NJ-6***

### ***Highlands***

#### **National Marine Fisheries Service (NMFS) - [James J. Howard Laboratory](#)**

The James J. Howard Marine Sciences Laboratory, located on the New Jersey shore at Sandy Hook, is a state-of-the-art marine research facility shared by NOAA and the State of New Jersey, and located in the National Park Service Gateway Recreational Area. Scientists study the effects of environmental factors on fishery resources, near-shore ecosystems, offshore fish habitat, habitats in designated Wind Energy Areas in the Northeast, and ocean processes. Emphasis of seawater experimental investigations is on studies of reproductive activity and early life stages of marine animals, since these are generally the most vulnerable to environmental variation caused by pollution, climate change, ocean acidification and other factors. The laboratory also is home to one of the country's premier ocean acidification experimental facilities, which is used to evaluate the effect of ocean acidification on marine organisms.

#### **National Marine Fisheries Service (NMFS) - [Habitat Conservation Division](#)**

Housed with the Sandy Hook Laboratory, this office provides local support for NMFS' habitat conservation efforts. It provides consultative services for federal activities and federally permitted activities that could affect living marine resources or the habitats upon which they depend.

#### **National Ocean Service (NOS) - [Office for Coastal Management](#)**

Located within the James J. Howard Marine Sciences Laboratory, the Office for Coastal Management provides a Coastal Management Specialist to implement the National Coastal Zone Management Program in the Mid-Atlantic region.

### ***Mullica River-Great Bay***

#### **National Ocean Service (NOS) - [Jacques Cousteau National Estuarine Research Reserve](#)**

The 114,873-acre Jacques Cousteau Research Reserve, designated in 1997 and managed by Rutgers University Institute of Marine and Coastal Sciences, is regarded as one of the least disturbed estuaries in the densely populated urban corridor of the Northeastern United States. The reserve conducts research on the physical, chemical, and biological components of its estuaries and neighboring watersheds, and is established as a sentinel site for monitoring the impacts of changing water levels and inundation on marsh habitats. The education program brings the latest marine science research into classrooms with a focus on enhancing basic scientific skills, problem-solving, and environmental awareness. The training program provides up-to-date scientific information and access to technologies and skill-building opportunities to address climate change adaptation opportunities in communities throughout the New Jersey coastal zone.

**National Ocean Service (NOS) – [Margaret A. Davidson Graduate Fellowship](#)**

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at the Jacques Cousteau National Estuarine Research Reserve will focus their research on the impact of pH and dissolved organic carbon on phytoplankton community composition in two New Jersey estuaries.

**NJ-8**

**[Jersey City](#)**

**NOAA Office of Education - [Environmental Literacy Program](#)**

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In New Jersey, ELP supports the Liberty Science Center (Hudson), which has a permanent exhibit featuring NOAA's Science On a Sphere (SOS) and is a member of NOAA's SOS Users Collaborative Network (SOS Network). The SOS Network connects over 150 science education institutions worldwide to the latest NOAA data as part of a focused effort to increase environmental literacy at all ages.

**NJ-10**

**[Jersey City](#)**

**Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere at Liberty Science Center](#)**

Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain what are sometimes complex environmental processes, in a way that is simultaneously intuitive and captivating.

**NJ-11**

**[Morristown](#)**

**Office of Oceanic and Atmospheric Research (OAR) - [Science on a Sphere at Morristown-Beard School](#)**

Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain what are sometimes complex environmental processes, in a way that is simultaneously intuitive and captivating.

**NOAA Office of Education - [Environmental Literacy Program](#)**

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In New Jersey, ELP supports the Morristown-Beard School (Morris), which has a permanent exhibit featuring NOAA's Science On a Sphere (SOS) and is a member of NOAA's SOS Users Collaborative Network (SOS Network). The SOS Network connects over 150 science education institutions worldwide to the latest NOAA data as part of a focused effort to increase environmental literacy at all ages.

## NJ-12

### Princeton

#### **Office of Oceanic and Atmospheric Research (OAR) - [Cooperative Institute for Modeling the Earth System](#)**

The Cooperative Institute for Modeling the Earth System (CIMES) was established at Princeton University. CIMES serves as a mechanism to promote collaborative research between university scientists and those in NOAA. The vision of CIMES is to "be a world leader in understanding and predicting the earth system, across time scales from days to decades, and from the local to global spatial scales, with particular focus on extreme events, and integrating physical, chemical, and biological components. The primary NOAA research partner of CIMES is the Geophysical Fluid Dynamics Laboratory (GFDL). CIMES conducts research across three themes: (1) Earth system modeling; (2) seamless prediction across time and space scales; and (3) Earth system science: analysis and applications.

#### **Office of Oceanic and Atmospheric Research (OAR) - [Geophysical Fluid Dynamics Laboratory](#)**

The Geophysical Fluid Dynamics Laboratory (GFDL) conducts research directed toward understanding climate on global and regional scales; the earth's atmospheric general circulation; the spatial and temporal dynamics of the oceans; the interactions of the atmosphere and oceans; and the interactions of various trace constituents with the atmosphere and oceans. GFDL develops models of the atmosphere, land, and oceans to study their behavior and properties. The Laboratory pioneered the use of general circulation models of the atmosphere and contributes to the Nation's programs for improved understanding of climate change and improved weather forecasting. GFDL is proud to collaborate with the Cooperative Institute for Modeling the Earth System (CIMES) at Princeton University to carry out research in the earth system sciences.

#### **Office of the Chief Information Officer (OCIO) - [High Performance Computing and Communications](#)**

The Office of the Chief Information Officer manages research and development high performance computing for weather and climate modeling, research, and predictions, supporting improvements in areas such as the prediction of severe weather, seasonal prediction of temperature and precipitation, and forecasting the next Sandy-like storm.

## NJ-13

### Jersey City

#### **National Ocean Service (NOS) - [New York / New Jersey Harbor PORTS®](#)**

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in New York Harbor with real-time data quality-controlled and disseminated to local users for safe and efficient navigation. Real-time data are available for water levels from four stations, tidal currents from threeone stations, meteorological data from six five locations and air gap observations from bridges at two locations.

#### **National Ocean Service (NOS) - [Ocean Guardian School Program](#)**

An Ocean Guardian School makes a commitment to the protection and conservation of its local watersheds, the world's ocean, and special ocean areas, like national marine sanctuaries. Funds are provided to schools at \$4,000 per year if the school makes this commitment by proposing and then implementing a school- or community-based conservation project. Once the school has completed its project, the school receives official recognition as a NOAA Ocean Guardian School. To date, the Ocean Guardian School Program has partnered with more than 147 schools and has reached more than 80,400 students.

#### **National Ocean Service (NOS) - Students for [Zero Waste Week](#)**

Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on



reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

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## **Coastal**

### **National Marine Fisheries Service (NMFS) - [Deep-Sea Coral Research and Technology Program](#)**

NOAA's Deep Sea Coral Research and Technology Program is the only federal program dedicated to mapping, characterizing, and understanding deep-sea coral ecosystems, and sharing the information needed to conserve these habitats. The Program -- called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act and within the Office of Habitat Conservation -- is working with other NOAA offices and external partners to conduct fieldwork to study the distribution, abundance, and diversity of deep sea corals and sponges. Since 2009, more than 42,500 square miles of seafloor have been mapped and surveyed for deep-sea coral habitats from Florida to Maine, in Alaska and the West Coast, and in Hawaii and the Marianas Trench.

### **National Marine Fisheries Service (NMFS) - [Cooperation with States Program](#) and [Species Recovery Grants](#)**

Under the authority of section 6 of the Endangered Species Act, the Cooperation with States Program brings states, NMFS, and other partners together to recover threatened and endangered species. A total of 25 U.S. territories and coastal states, including New Jersey, currently participate in this program. Competitive grants are awarded to states through the Species Recovery Grants to States Program to support management, monitoring, research and outreach efforts for species that spend all or a portion of their life cycle in state waters. The funded work is designed to prevent extinctions or reverse the decline of species, and restore ecosystems and their related socioeconomic benefits. Twenty-five coastal states, including New Jersey and U.S. territories, currently participate in this program. The New Jersey Department of Environmental Protection Division of Fish and Wildlife has received multiple awards through this program, including grants to support projects focused on Atlantic and shortnose sturgeon.

### **National Marine Fisheries Service (NMFS) - [Sea Turtle Salvage and Stranding Network](#)**

The Sea Turtle Stranding and Salvage Network (STSSN) was formally established in 1980 to collect information on and document strandings of marine turtles along the U.S. Gulf of Mexico and Atlantic coasts. The network, which includes federal, state and private partners, encompasses the coastal areas of the eighteen-state region from Maine to Texas, and includes portions of the U.S. Caribbean. Data gathered by the Network helps inform bycatch reduction efforts, monitor factors affecting turtle health, and provide other information needed for sea turtle management and population recovery.

### **National Marine Fisheries Service (NMFS) - [National Marine Mammal Stranding Network](#) and [John H. Prescott Marine Mammal Rescue Assistance Grant Program](#)**

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There is one stranding network member in the state.

NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. Although Prescott grants have been awarded to recipients in NJ in previous years, no grants were awarded in FY20. Nationwide, 43 competitive grants were awarded for a total of \$3.7 million.

**National Ocean Service (NOS) - [National Water Level Observation Network](#)**

The National Ocean Service operates three long-term continuously operating tide stations in the state of New Jersey, which provide data and information on tidal datum and relative sea level trends, and are capable of producing real-time data for storm surge warning. These stations are located at Sandy Hook, Atlantic City, and Cape May. Each station is associated with a set of tidal benchmarks installed in the ground that is used to reference the height of the water levels and helps connect the water level to land.

**National Ocean Service (NOS) - [Navigation Manager](#)**

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in New Jersey. They help identify the navigational challenges facing marine transportation in the region and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies.

**National Ocean Service (NOS) - [Navigation Response Team](#)**

The Office of Coast Survey (OCS) maintains the nation's nautical charts and publications for U.S. coasts and the Great Lakes. OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-New London is headquartered in New London, CT and is able to respond in the Northeast region within 24 to 48 hours.

**National Ocean Service (NOS) - [Coastal and Estuarine Land Conservation Program](#)**

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. NOAA awarded eight grants in New Jersey, and these lands are protected in perpetuity.

**National Ocean Service (NOS) – [National Coastal Zone Management Program](#)**

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the New Jersey Department of Environmental Protection to implement the National Coastal Zone Management Program in New Jersey. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

**National Ocean Service (NOS) – [Digital Coast](#)**

The Digital Coast is a focused information resource developed to meet the unique needs of coastal communities. Developed and maintained by NOAA's Office for Coastal Management, content comes from hundreds of organizations, including federal, state, and local agencies, plus private sector and non-profit contributors. The Digital Coast website provides not only site-specific coastal data, but also related the tools, training, and information needed to make these data useful for coastal decision makers.



**National Ocean Service (NOS) – [National Coastal Resilience Fund](#)**

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In New Jersey, the NCRF awarded two projects in FY18, three in FY19, and one in FY20.

**National Ocean Service (NOS) – [Mid-Atlantic Committee on the Ocean](#)**

The Mid-Atlantic Committee on the Ocean (MACO) is a committee established by the [Mid-Atlantic Regional Council for the Ocean](#) (MARCO) to foster collaboration among states, federal agencies, the Mid-Atlantic Fishery Management Council, and federally recognized tribes to enhance the vitality of the region's ocean ecosystem and economy through increased communication and collaboration. To maintain quality constituent service, staff from NOAA Office for Coastal Management lead NOAA's engagement with MACO, MARCO and state coastal management programs to improve the delivery of NOAA products and services in this region.

**National Ocean Service (NOS) - [Scientific Support Coordinator and Regional Resource Coordinator](#)**

NOAA's Office of Response and Restoration (OR&R) brings decades of experience, technical expertise and scientific analysis in response to oil and hazardous chemical spills. In addition to events that draw the national eye like Hurricane Sunday, OR&R also supports response to local emergencies. Eleven regionally based Scientific Support Coordinators (SSCs) harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, oil science and properties, and chemical hazard assessment to reduce risks to coastal habitats and resources. For spills in New Jersey, the SSC based in Sandy Hook works directly with the U.S. Coast Guard and the U.S. Environmental Protection Agency to provide critical scientific support to the Federal On-Scene Coordinator. OR&R also helps develop preparedness plans that identify spill response actions with the greatest environmental benefit and trains hundreds of members of the response community each year on the scientific and technical aspects of spills.

OR&R's Regional Resource Coordinators (RRCs) provide scientific and technical expertise and timely response to oil spills or hazardous materials releases to collect information, samples, and evidence that are time dependent and critical to support natural resource damage assessments throughout the coastal US. RRCs work on multi-disciplinary scientific, economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources through determination of injuries and pathway, and demonstration of causal mechanisms. The goal of the RRCs efforts is to determine, often through the Damage Assessment, Remediation, and Restoration Program (DARRP), the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use. To date, DARRP and co-trustees have recovered almost \$52M for restoration of natural resources injured by 26 oil spill and waste site settlements in New Jersey.

**National Ocean Service (NOS) - [Atlantic Environmental Response Management Application](#)**

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Atlantic Environmental Response Management Application (ERMA®) is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. ERMA staff continued to work closely with Federal and State agencies for drills, hurricane response, and incidents. Maintained habitat data for sensitive species. Ensured data was kept up-to-date and data collection methods were kept consistent.

**National Ocean Service (NOS) - [Marine Debris Projects and Partnerships](#)**

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Mid-Atlantic Regional Coordinator supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. In New Jersey, the MDP is working with Stockton University to remove derelict crab pots from southern New Jersey coastal bays during the fishery off-season and bridge the generational gap through peer-to-peer mentoring of local crabbers. The MDP is partnering with Rutgers University to research the movement of microplastics down the Delaware River to the confluence with Delaware Bay, and determine the role this mixing area may play as the entry point for microplastics into the food chain. The MDP is working with stakeholders to develop the Mid-Atlantic Marine Debris Action Plan, which will provide a road map for strategic progress in making the Mid-Atlantic, its coasts, people, and wildlife free from the impacts of marine debris. The MDP continues to work with state and local governments, and other stakeholders, to develop and implement the New Jersey Marine Debris Emergency Response Guide.

**National Ocean Service (NOS) - [U.S. Integrated Ocean Observing System](#) ([Mid-Atlantic Regional Association Coastal Ocean Observing System](#))**

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) is one of the 11 Regional Associations and it extends from Cape Hatteras to Cape Cod including the estuaries and the continental shelf waters. MARACOOS provides the necessary ocean observing, data management, and forecasting capacity to systematically address prioritized regional themes including maritime safety, ecosystem based management, water quality, coastal inundation, and offshore energy development.

**National Weather Service (NWS) - [Buoys](#)**

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations.

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**Statewide**

**National Marine Fisheries Service (NMFS) - [Greater Atlantic Regional Fisheries Office](#) and [Northeast Fisheries Science Center](#)**

NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 mile offshore). Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations,

restores and protects habitat and works to reduce wasteful fishing practices, and promotes sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species (e.g. whales, turtles). The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast “multispecies complex” (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic Right whales, leatherback, loggerhead, leatherback, and Kemp’s ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The Office also fosters sustainable [aquaculture](#) in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories the Center uses four research vessels to support its work. They are: the NOAA ships *Henry B. Bigelow*, and the small research vessels *Gloria Michelle*, *Victor Loosanoff*, and *Nauvoo*. The Greater Atlantic Regional Fisheries Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia.

#### **National Marine Fisheries Service (NMFS) - [Restoration Center](#)**

The NOAA Restoration Center, within the Office of Habitat Conservation, works with private and public partners locally and nationwide to increase fisheries productivity by restoring coastal habitat. Projects support sustainable fisheries, help recover threatened and endangered species, and reverse damage from disasters like oil spills, ship groundings, and severe storms. Through Community-based Restoration Program projects, more than 1400 acres of fisheries habitat have been restored, rehabilitated, and protected and over 300 miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. The Restoration Center works with private and public partners in New Jersey to restore tidal wetlands, construct fish ladders, remove dams, modify culverts to improve tidal flushing in coastal wetlands, remove invasive species and restore native shellfish populations.

#### **National Marine Fisheries Service (NMFS) - [Office of Law Enforcement](#)**

NOAA’s Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement’s Northeast Division is headquartered in Gloucester, MA, with New Jersey field offices in Newark, Northfield and Wall.

**National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - [Damage Assessment, Remediation, and Restoration Program](#)**

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life.

**National Ocean Service (NOS) - [Coastal Management Fellowship](#)**

The NOAA Coastal Management Fellowship matches postgraduate students with state and territory coastal zone programs to work on two-year projects proposed by the state or territory. The New Jersey Coastal Management Program is hosting a fellow who will identify measures or frameworks for evaluating community resilience, develop a method for equitable community resilience planning, and suggest integration of these findings with state initiatives in New Jersey.

**National Ocean Service (NOS) – [Regional Geodetic Advisor](#)**

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Barre, Vermont serving the Northeast region including New Jersey. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

**National Weather Service - [NEXRAD \(WSR-88D\) Systems](#)**

NEXRAD is used to warn the people of the United States about dangerous weather and its location. This radar technology allows meteorologists to warn the public to take shelter with more notice than ever before. The NEXRAD network provides significant improvements in severe weather and flash flood warnings, air traffic safety, flow control for air traffic, resource protection at military bases, and management of water, agriculture, forest, and snow removal. NEXRAD radar has a range of up to 250 nautical miles, and can provide information about wind speed and direction, as well as the location, size, and shape of precipitation. There are 159 operational NEXRAD radar systems deployed throughout the United States and overseas, of which one is in New Jersey.

**National Weather Service (NWS) - [Automated Surface Observing Systems Stations](#)**

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorm, and fog. There are 10 ASOS stations in New Jersey.

**National Weather Service (NWS) - [Cooperative Observer Program Sites](#)**

The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 10,000 volunteers take observations on farms, in urban and

suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was formally created in 1890 under the NWS Organic Act to provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal (including the Department of Homeland Security), state and local entities, as well as private companies (such as the energy and insurance industries). In some cases, the data are used to make billions of dollars' worth of decisions. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 49 COOP sites in New Jersey.

**National Weather Service (NWS) - [NOAA Weather Radio All Hazards Transmitters](#)**

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as AMBER alerts or 911 Telephone outages). NWR is provided as a public service by the NWS and includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are three NWR transmitters in New Jersey.

**Office of Oceanic and Atmospheric Research (OAR) – [New Jersey Sea Grant College Program](#)**

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAA that integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The New Jersey Sea Grant Consortium is an affiliation of colleges, universities and other groups dedicated to advancing knowledge and stewardship of New Jersey's marine and coastal environment. It meets its mission through research, education and outreach programs that promote well-informed and responsible use of New Jersey's coastal and marine environment. The New Jersey Sea Grant College Program at the New Jersey Sea Grant Consortium funds competitive university-based research and through its outreach specialists, applies that research to practical purposes. Its education and communications programs encourage marine science literacy and environmental stewardship by offering opportunities for groups and individuals to learn about New Jersey's marine, coastal and estuarine environments. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Administrative offices are located in Fort Hancock.

**NOAA Office of Education - [Environmental Literacy Program](#)**

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In New Jersey, ELP supports the Shore Bowl in New Jersey, one of 25 regional competitions of the National Ocean Sciences Bowl (NOSB). The NOSB is an academic competition that engages high school students in learning about ocean sciences and related STEM careers while helping them become knowledgeable citizens and environmental stewards.

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